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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,643	01/11/2002	Gordon Bechtel	D2505	5978

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GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
USTARIS, JOSEPH G	

ART UNIT	PAPER NUMBER
2623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/043,643	BECHTEL ET AL.	
	Examiner	Art Unit	
	Joseph G. Ustaris	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) *18-27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 28-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated March 28, 2007 in application 10/043,643.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 11, and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Cameron et al. (US 20050028206A1).

Considering claim 1, Cameron et al. (Cameron) discloses a method of providing a virtual file system including application data files to selected set-top terminals within a cable network, each of the selected set-top terminals having one or more client applications residing thereon (paragraph 32-33), the method comprising the steps of:

creating a plurality of virtual streams (multicasting) in a single downstream service (Near-video-on-demand, pay-per-view) within a stream set where the virtual streams carry multicast addresses associated with the selected set-top terminals in the cable network (the virtual streams are created and delivered to multiple viewers by

using multicast addressed virtual streams which allow one main stream to appear as many multiple virtual streams directed to selected set top boxes with the corresponding multicast addresses, See paragraph 36);

streaming application data files from a data carousel onto one or more of the virtual streams (multicasted NVOD and Interactive program guide, See paragraph 36); and

delivering the stream set to the client application in accordance with delivery criteria set by an API residing on the set-top terminal (networking API installed in the STB, paragraph 39).

With respect to claim 2, Cameron discloses a method wherein the delivery criteria includes configuration of the virtual file system across the stream set (protocols configure the IP, NFS and MPEG transmission systems, paragraph 39 line 5-7).

As for claim 3, Cameron discloses the method wherein the configuration comprises partitioning (the system sets up the IP protocols meaning it partitions different streams with different IP addresses paragraph 39).

In regard to claim 4, Cameron discloses a method wherein the delivery criteria include in-band or out-of-band transport criteria (In Fig. 2 the system sends data over the broadband network 26 which means it satisfies the out of band transport criteria alternately, the system also meets the in band criteria since it sends high speed data in combination with low speed telephone signals within the same broadband network paragraph 23).

Dealing with claim 5, Cameron discloses the method wherein the delivery criteria include bandwidth availability on the cable network (Fig. 2, the head-end sends data over a broadband network to a set top box at the user end which means it includes bandwidth availability, paragraph 26 and paragraph 31).

Considering claim 6, Cameron discloses the method wherein the delivery criteria include bit-rate (when the sources are first received by satellite, the bit rate determines the transcoding method at the head-end, paragraph 28).

With respect to claim 7, Cameron discloses the method wherein the stream set carries operations information (the stream sets consist of different downstream services such as NVOD, IPG, e-mail. Information included in the stream set inherently informs the ASDL Modem of what the type of data is being received as well as the destination of the data paragraph 35-36).

Dealing with claim 8, Cameron discloses the method wherein the operations information includes structured information describing the virtual file system (when the user requests a NVOD service, the STB issues a command to the ASDL modem when in turn, issues a command to the head-end, the head-end responds with information on how to obtain the NVOD stream though a multicast address, paragraph 35 and 36).

Considering claim 11, Cameron discloses the method wherein the stream set is MPEG-2 compliant (paragraph 33).

With respect to claim 14, Cameron discloses the method wherein the application data files are streamed according to a file selection algorithm (when the user selects a

data file he or she wishes to view, the head-end inherently uses a file selection algorithm to stream the appropriate file, paragraph 26).

Dealing with claim 15, Cameron discloses the method wherein the file selection algorithm selects files in a virtual directory (the file is selected by the equipment at the head-end where the head-end consists of digital video equipment that gathers, processes, stores and distributes video, paragraph 27-30).

With regard to claim 16, Cameron discloses the method wherein the file selection algorithm selects files that are applicable to time window (the user is provided with an IPG which contains a list of programs that are currently available for the user to watch within the available time window therefore the viewer will not be able to select programs for immediate viewing that are out of the range of the time window therefore the server's selection algorithm selects only the files that are applicable to the time window, paragraph 50).

As for claim 17, Cameron discloses the method wherein the file selection algorithm limits selected files to those which are applicable to a sliding time window (when the TV programs are not available in the sliding time window, they will not be displayed by the IPG paragraph 50).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. in view of Takahashi (US006633592B1).

In regard to claim 9, Cameron discloses the method wherein the structured information includes an MPEG-2 but does not specifically teach that the MPEG-2 includes PAT.

In an analogous art Takahashi discloses MPEG-2 PAT (column 6 lines 35-55). It would have been obvious to one of ordinary skill in the art to include MPEG-2 PAT, as taught by Takahashi, for the benefit/advantage of using standard MPEG-2 Transport protocol.

As for claim 10, Cameron discloses the method wherein the structured information includes an MPEG-2 but does specifically teach that the MPEG-2 includes PMT.

In an analogous art Takahashi discloses MPEG-2 PMT (column 6 lines 35-55). It would have been obvious to one of ordinary skill in the art to include MPEG-2 PMT as taught by Takahashi, for the benefit/advantage of using standard MPEG-2 Transport protocol.

Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. in view of Rosen et al. (US005745767A).

As for claim 12, Cameron discloses API that are provided to the client application (paragraph 39). Cameron does not specifically teach the method wherein the API includes wrapper functions.

However, in an analogous art Rosen discloses a method wherein the API includes wrapper function (column 35 lines 7-11). It would have been obvious to one of ordinary skill to modify Cameron's system to include API that includes wrapper functions, as taught by Rosen, for the benefit/advantage using standard API protocol.

Considering claim 28, Cameron discloses a method for providing an application programming interface (API) that is resident on a set-top terminal coupled to a cable network with virtual file mounting and directory information gathering functionality within a carousel file environment (networking API installed on the STB, paragraph 39, NVOD using multicasted streams, paragraph 36, and IPG maintained in the network, paragraph 50).

Cameron fails to specifically teach a method comprising the steps of:

providing a plurality of wrapped code to assemble a set of related application data files from a plurality of virtual data streams or a stream set;

providing one or more wrapper functions to a client application running on the set-top terminal to access the wrapped code; and

executing a wrapped code in response to a wrapper function call placed by the client application.

However, in an analogous art Rosen discloses a method comprising the steps of:

providing a plurality of wrapped code to assemble a set of related application data files from a plurality of virtual data streams or a stream set (Rosen discloses that API uses wrapper functions that are execute wrapped code which means that Cameron's system uses wrapped code when executing functions that were initiated by the API commands, column 35 lines 7-11);

providing one or more wrapper functions to a client application running on the set-top terminal to access the wrapped code (there is API on Cameron's STB and once again, since API uses wrapper functions, when a function is called by the API on the STB, the STB access the wrapped code though the API, Cameron paragraph 35 and Rosen column 35 lines 7-11); and

executing a wrapped code in response to a wrapper function call placed by the client application (Cameron paragraph 35 and Rosen column 35 lines 7-11).

It would have been obvious to one of ordinary skill in the art to modify Cameron's system to include providing a plurality of wrapped code to assemble a set of related application data files from a plurality of virtual data streams or a stream set; providing one or more wrapper functions to a client application running on the set-top terminal to access the wrapped code; and executing a wrapped code in response to a wrapper function call placed by the client application, as taught by Rosen, for the benefit/advantage of using standard API protocol by executing wrapper functions when interfacing two different system components.

Claims 13 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. in view of Rosen et al. as applied to claims 12 and 28 above, and further in view of Klein (US006185590B1).

With respect to claims 13 and 29, Cameron and Rosen disclose all the limitations of claims 1 and 28 but fail to specifically teach wrapper functions that include a synchronous function-call and response.

However in an analogous art Klein discloses synchronous API (API calls and uses wrapper functions when it interfaces between two devices therefore the functions calls are executed in a synchronous manner since API commands executed in a synchronous manner, column 2 lines 15-16). It would have been obvious to one of ordinary skill in the art to modify the combined systems of Cameron and Rosen to include synchronous function-call and response in an API environment, as taught by Klein, for the benefit/advantage of using the standard API functionality.

Dealing with claim 30, Cameron and Rosen disclose all the limitations of claim 28 but fail to specifically disclose an asynchronous response to a function-call is implemented for a selected function.

However in an analogous art Klein discloses asynchronous API (API calls and uses wrapper functions when it interfaces between two devices therefore the functions calls are executed in a asynchronous manner since API commands are executed in an asynchronous manner, column 2 lines 15-16). It would have been obvious to one of ordinary skill in the art to modify the combined systems of Cameron and Rosen to

include asynchronous response to a function-call in an API environment, as taught by Klein, for the benefit/advantage of using the standard API functionality.

As for claim 31, Cameron, Rosen and Klein disclose a method wherein the selected function includes client application data file retrieval (Cameron paragraph 39).

With respect to claim 32, Cameron, Rosen and Klein disclose the method wherein the API is accessed through an API server resident on the set-top terminal (Cameron, the STB stores various types of API, paragraph 39).

Considering claim 33, Cameron, Rosen and Klein disclose the method wherein the API is resident in firmware in the set-top terminal (Cameron, paragraph 39).

As for claim 34, Cameron, Rosen and Klein disclose the method wherein the API is downloaded to the set-top terminal as executable code (Cameron, paragraph 39).

Response to Arguments

4. Applicant's arguments filed March 28, 2007 have been fully considered but they are not persuasive.

Applicant argues with respect to claims 1-17 and 28-34 that Cameron does not disclose a plurality of virtual streams or a plurality of virtual data streams or a stream set. However, reading the claims in the broadest sense, Cameron does meet those limitations in the claims. Cameron discloses providing a single downstream service (e.g. Near-video-on-demand, pay-per-view) that is multicast over the broadband network. In a multicast environment a single stream is send to multiple recipients. Therefore, for each viewer who wishes to use the single downstream service, a "virtual stream" is

provided to that viewer. Therefore, for multiple viewers a "plurality of virtual streams" or "plurality of virtual data streams" are created from the single downstream service (See paragraph 0036). Furthermore, Cameron discloses that the virtual streams carry multicast addresses associated with the selected set-top terminals (See paragraph 0036).

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5 PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JGU
October 2, 2007

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600